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ABSTRACT

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A STUDY OF VARIABLES RELATING TO WOMEN'S VOCATIONAL PATTERNS:

A FIFTEEN YEAR FOLLOW-UP

by

Jean M. Kummerow and Thomas J. Hummel

University of Minnesota

A Paper Presented at the Annual Convention

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Abstract

A Study of Variables Relating to Women's Vocational Patterns:

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A Vocational Pattern Index, based on Zytowski's (1969) postulates on women's vocational participation, was developed. This index is based on age of first entry into the job market, number of entries, years of work, and degree of participation. Fifteen years after graduation from the University of Minnesota, a questionnaire requesting detailed work, educational, and family life histories and various attitudes was sent to 143 females. 109 persons responded. The relationship between the Vocational Pattern Index and 27 variables was studied using multiple regression. Number of children was found to be the best predictor of vocational pattern.

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INTRODUCTION

It has been stated in the career development literature that the major theories apply to men, not to women, and that the special problems of women in their pursuits of life work deserve both empirical and theoretical attention (Lewis, 1965, 1968; Zytowski, 1969; Wolfson, 1972; Hansen, 1972). There seem to be many factors that complicate the formation of a general theory of women's vocational development--factors that seem to relate directly or indirectly to marriage and child rearing.

There have been some attempts to deal with the career development of women by identifying possible career patterns; all of these theories include the role of homemaker although some place it in a more central role than others. Super (1957) described seven career patterns for women with the role of childbearer and homemaker as central. Anastasi (1969) identified five patterns for women based on socio-economic divisions but did not assume that homemaking was central. She suggested that "women may follow a variety of patterns, depending upon their individual needs, aptitudes, and circumstances" (p. 71). Ginzberg and Associates (1966) categorized women according to the type of work history they exhibited, from a continuous work record to none at all. Psathas (1968) and Sobol (1963) pointed out the importance of a sociological perspective when looking at a woman's career development. They suggested examining the socializing influences of the woman's family and its effects on her values pertaining to work and marriage. Once the woman married, various conditions operating within her own marriage influenced her decision to work or not.

Zytowski (1969) made one of the first attempts to develop a theory of women's career development. He went beyond the classification systems presented by other authors and offered nine postulates on women's career develop-

ment, several of which are explored as part of this research. He said that woman's modal role is that of homemaker and that any degree of vocational participation constitutes a departure from that role. The aspects of vocational participation which distinguish patterns of vocational participation are (1) age or ages of entry into the labor market, (2) span of participation (the number of entries into the work force and the length of participation in that job), and (3) degree of participation (the proportion of workers in an occupation which are males). He felt that these three aspects were sufficient to distinguish patterns of vocational participation and delineated three such patterns:

1. Mild vocational pattern: very early or late entry, a relatively brief span, and a low degree of participation.

2. Moderate vocational pattern: early entry, lengthy span, and a low degree of participation, or multiple entries and a higher degree of participation.

3. Unusual vocational pattern: early entry, a lengthy or uninterrupted span, and a high degree of participation.

Research studies which analyze data on women's careers have tended to study only two "patterns", i.e. those of women who work in the labor market (career women) and those of women who work in the home (homemakers). Factors that seem to differentiate homemakers and career-oriented women include marital status, attitudes toward career and marriage, amount of education, number and ages of children, spouse's occupation, salary and attitude toward the wife's working, and commitment to volunteer work. In addition to being limited to only two career patterns, many of the studies have classified women into the two patterns on the basis of interest test scores or on the plans of the

woman or on the attitudes of the woman toward career and marriage. Rarely have such researches been based on the woman's actual life's work.

This research had two objectives. The first was the development of a Vocational Pattern Index based on the factors Zytowski lists as differentiating vocational patterns. The second objective was to investigate variables suggested by the literature in order to find a set which could predict the Vocational Pattern Index. Accomplishing these objectives permits a quantitative specification of women's career patterns and a more succinct expression of the relationship between these patterns and other aspects of women's beliefs and life styles.

METHODS

Subjects. The initial sample consisted of 143 females who graduated fifteen years prior to the study (in June 1958) from the College of Education at the University of Minnesota. The sample was selected by taking all women who majored in elementary education, art, business, English, foreign languages, music, physical education, social science, or science education. Data were gathered through the use of a mailed questionnaire with appropriate follow-ups. Up to six contacts (four mail and two telephone) were carried out across ten weeks; a response rate of 77.6% was obtained. From the 111 questionnaires which were returned, those which indicated that the women had been in the labor force at least once since graduation from college (N=109) were used in the analysis.

The Questionnaire. A review of literature (including questionnaires used in previous research studies) and personal communications with other researchers led to a working draft of the questionnaire. The face validity of the questionnaire was checked with colleagues at the University of Minnesota, and finally, the questionnaire was completed and commented on by five people with education degrees. The questionnaire was continually revised according to the information and suggestions given by the individuals involved in the latter two steps. The questionnaire was used to collect information on the independent variable, i.e. Vocational Pattern Index, and the dependent variables. The independent variable is described below while a list of the dependent variables can be found in the first column of Table 1. The questionnaire is available from the authors upon request.

Vocational Pattern Index. In studying the three patterns of vocational behavior presented by Zytowski, it was apparent that not all of the possible

combinations of factors were covered by his patterns. The authors believed that other combinations were reasonable and that an index capable of reflecting greater diversity in career patterns than Zytowski's three would be desirable.

(1) The "age of entry" was defined as the number of years which elapsed between graduation and entering the labor force.

(2) The degree of participation was defined on the basis of a five point scale:

5 = not working in the labor force

4 = 76-100% women in the occupation

3 = 51-75% women in the occupation

2 = 26-50% women in the occupation

1 = 0-25% women in the occupation

The percentages were determined by Census Bureau information on men and women in each field. For the years 1958-1965, the 1960 Census was used in assigning values. For 1966-1973, the 1970 Census was used. For women with several different degrees of participation in their work history, the most frequent value was chosen. In cases of ties the lowest value was used.

(3) Span of participation included two values--number of entries into the labor market and total number of years worked. The number of times the person entered the labor market after being unemployed or working as a student or homemaker was determined. Part-time work was considered equal to one-half the value accorded full-time employment. The scores for the total number of years worked were reversed by subtracting them from an appropriate constant. This subtraction was necessary to make this variable consistent with the others so that high values would relate to a homemaking pattern.

The four sets of values ("age of entry", degree of participation, number

of entries, and total number of years worked) were transformed so that each had unit sample variance. They were then summed to form the overall index. Because Zytowski's theory did not specify differential importance for the factors, no theoretical basis existed for differentially weighting the transformed scores.

Data Analysis. The analysis included descriptive statistics to describe the distribution of the variables and inferential statistics to determine if significant relationships existed between the independent and dependent variables. For the inferential analysis, three subsets of the sample were formed: (a) all women (N=109); (b) married women (N=98); and (c) women with children (N=93). Simple and multiple regression procedures were used to determine the relationship between the index and the variables that were appropriate to each subset. Since computing regression equations based on all possible combinations of variables would have been too costly, a stepwise regression approach along with exploring regression models which were believed to show promise was used to find the "best" equation. The Statistical Package for the Social Sciences (SPSS) was used for all computing except the calculation of the Vocational Pattern Index. The latter was accomplished by a separate Fortran program.

RESULTS

Summary of the Descriptive Analysis. Approximately 73% of the subjects majored in elementary education with the remaining 27% scattered in various other majors. About 94% of the sample had been married at least once; 81% were married by the end of 1961 (within three years of graduation). The married women's family sizes (number of children) ranged from 0 (9%) to more than 6 (2%) with the average as 2.2 children per family and the mode equal to 2. The range of ages of the youngest child in the family was from less than one year of age to twenty-three years of age with 43% of the women having preschool children. All of these women had a B.S. degree and about half of them had taken at least some course work beyond that degree. Forty-six percent of the women were currently homemakers and received no salary. Of those receiving salaries, the range was from less than $5000 to over $25,000 annually with the majority earning under $12,000 a year. About half of the sample were involved in some type of volunteer work, commonly with a church or school.

Attitudinally, the majority of these women felt satisfied with their current occupations, would have made the same occupational and educational decisions over again, felt some of their education and most of their talents and abilities were being used in their current work, felt some satisfaction with the salary and more satisfaction with the prestige of the current occupation, felt that their work was important to them, and had husbands who encouraged their work.

A summary description of the sample's spouses revealed that 68% of the husbands were engaged in professional occupations (according to the Dictionary of Occupational Titles classification scheme); 80% had at least a college degree; and more than half of the husbands earned over $18,000 annually.

Scores on the elements that form the Vocational Pattern Index were as follows:

(1) Years elapsed after B.S. before entering the job market (i.e., "the age of entry") range from one to eight years with 95% entering within one year of graduation.

(2) Degree of participation, in this case the modal value, included all five possible values with 55% of the women falling in the "not working" category. Only 12% of the women worked in occupations where the majority of workers were male.

(3) Span of participation was broken down into two scores. The number of entries into the job market ranged from one to four with 48% entering the market only once and 38% entering it only twice. The total number of years worked ranged from 1-15 years with only 30% having worked more than ten years.

When these scores were combined to form the Vocational Pattern Index, sixty-six values resulted ranging from 3.51 to 21.11 with a mean of 9.56 and a standard deviation of 2.54. The woman whose Vocational Pattern Index score was 3.58 began work in business within the first year of graduation. She spent the fifteen years covered by this research working her way through executive ranks to a position of vice-president. She has worked continuously in the labor market. The woman whose Vocational Pattern Index score was 21.11 also began work within the first year of graduation but as an elementary school teacher. She became a homemaker after one year of work and never again entered the job market. The modal score for this sample was 6.51. These represent twelve women who have worked continuously as elementary school teachers since graduation from college.

Relationships Between the Vocational Pattern Index and the Dependent Variables. Zero order correlations between the Vocational Pattern Index

and the dependent variables were computed for the three subsets of women. Table I indicates the variables defined for each subset and the correlations of the dependent variables with the Vocational Pattern Index. When interpreting the sign of these correlations, it should be recalled that women whose career patterns were work-oriented (i.e., those who entered the job market only once and who worked continuously, etc.) had the lower scores and that those who had chosen to be homemakers had higher scores. For the groups which included "all women", a significant relationship was found for these variables: number of children ($r_{y1} = .56$), salary ($r_{y2} = -.50$), marital status ($r_{y3} = .35$), amount of further education ($r_{y4} = -.28$), and the amount of time spent on volunteer work ($r_{y5} = .17$). In addition, for the group of "married women", a significant relationship for the variable year when married ($r_{y6} = -.38$) was found. No other family life or attitude variables had significant correlations with the Vocational Pattern Index for any subset.

The "best" equation was obtained using two variables, number of children and salary in the group of "all women". Combined they produced a multiple correlation of .60.

None of the attitude variables were found significant in terms of their beta weights in the multiple regression equations.

Nothing was gained (in fact some predictive power was lost) by using the smaller sub-groups of married women and women with children. The multiple correlation coefficients were lower and the standard deviations of residuals higher for these sub-groups, indicating less predictive power than in the overall group.

TABLE I

Zero Order Correlations with the Vocational Pattern Index

Variable	Correlation by Group		
	All	Married	With Kids
Number of Children	.56 ***	.47 ***	.29 ***
Current Annual Salary	-.50 ***	-.38 ***	-.17 *
Year When Married		-.38 ***	-.27 ***
Marital Status--Married	.35 ***		
Amount of Further Education	-.28 ***	-.20 *	-.21 *
Amount of Time Spent on Volunteer Work	.17 *	.19 *	.13
Marital Status--Divorced	-.09	.04	.12
Marital Status--Remarried	.06		.03
Spouse's Level of Education		-.02	-.01
Spouse's Current Annual Salary		.10	.10
Spouse's Occupation			
Professional-1 †		.05	.12
Professional-2 ††		.04	.03
Professional-Educational Field		-.10	-.09
Clerical, Sales		.03	-.00
Service Occupation		.03	.01
Structural Work		-.10	-.07
Spouse's Attitude Toward Subject's Current Occupation		-.01	.03
Youngest Child's Age			.03
Satisfaction with Current Occupation	-.12		
Satisfaction with Educational Decisions	-.05		

Continued

TABLE I (continued)

Variable	Correlation by Group		
	All	Married	With Kids
Satisfaction with Occupational Decisions	-.09		
Utilization of Education in Current Occupation	-.03		
Utilization of Abilities in Current Occupation	-.01		
Satisfaction with Current Annual Salary	.04		
Satisfaction with Prestige of Current Occupation	.14		
Importance of Current Occupation to the Subject	.03		

† Occupations in architecture, engineering, math, physical, life, and social sciences, and medicine.

†† Occupations in law, writing, art, recreation, and managerial specializations.

*** $p < .005$

** $p < .01$

* $p < .05$

DISCUSSION AND CONCLUSIONS

In interpreting these results, it must be emphasized that this sample was homogeneous--all were college graduates with teaching credentials from the same university. Also, in 1958 there was little ethnic, racial or socioeconomic diversity among students in the College of Education at the University of Minnesota, the group from which this sample was drawn. In terms of the current descriptions of these individuals, homogeneity was also present. It may well be that with a more heterogeneous group, additional variables would have had predictive power.

From these results, it seems clear that women's vocational patterns can be quantified and related to other variables, even for a relatively homogeneous population.

This study is an empirical test of a set of postulates on women's career development and provides a methodology for objectively determining career patterns. When Zytowski first formulated these postulates, he made the charge that every one of them needed additional evidence to be valid. This study provides some evidence.

This research and similar studies can provide information that may eventually be useful in the counseling of women towards vocational participation. It has the potential to show how family life affects vocational behavior and to indicate which factors seem unimportant to this behavior. Furthermore it emphasizes the range of vocational patterns available to women--no longer is the choice between homemaker and career woman but rather which of the numerous patterns is best for the individual.

Hansen (1972) states "We need to find ways to encourage women to explore their needs, drives, commitments, preferences, and potentials in relation to

a variety of possible life styles" (page 89). This research has attempted such an exploration in that it provides some models and a framework for looking at these life styles.

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